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EXAMINER
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ART UNIT	PAPER NUMBER
2172	12

DATE MAILED:
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Application No.	Applicant(s)
09/073,748	Weissman et al
Examiner	Art Unit
Ella Colbert	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _May 25, 2001_ .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _88-132_ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _88-132_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a) ☒ All b) ☐ Some* c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _10_

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

1.   Claims 88- 132 are pending in this communication. Claims 48-87 have been canceled in

this communication filed 05/25/01, entered as Supplemental Amendment C, paper number 11.

2.   Applicants' Pre-Amendment B filed 03/26/01 has been entered as paper number 8.

3.   Applicants' CPA filed 03/26/01 has been entered as paper number 9.

Specification

4.   The Specification is objected to because The Applicant's have a description as a table of

contents on pages 8-9. Correction is required. See MPEP § 608.01(b).

5.   The following guidelines illustrate the preferred layout and content for patent applications.

These guidelines are suggested for the applicants' use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except

for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should

appear in upper case, without underlining or bold type, as section headings. If no text follows the

section heading, the phrase "Not Applicable" should follow the section heading:

(a)   Title of the Invention.

(b)   Cross-References to Related Applications.

(c)   Statement Regarding Federally Sponsored Research or Development.

(d)   Reference to a "Microfiche Appendix" (see 37 CFR 1.96).

(e)   Background of the Invention.

        1.   Field of the Invention.

        2.   Description of the Related Art including information disclosed under 37

        CFR 1.97 and 1.98.

(f)   Brief Summary of the Invention.

(g)   Brief Description of the Several Views of the Drawing(s).

(h)   Detailed Description of the Invention.

(I)   Claim or Claims (commencing on a separate sheet).

(j)   Abstract of the Disclosure (commencing on a separate sheet).

(k)   Drawings.

(l)   Sequence Listing (see 37 CFR 1.821-1.825).

Claim Objections

6.   Claims 90, 100, 107, 116, 123, and 129 are objected to because of the following

informalities: Claim 90, page 2, lines 3-4 and lines 5-6, recites the limitation "... the populated

metadata scheme." Claims 100, 107, 116, 123, and 129 have a similar problem. It is not clear to

the Examiner if the Applicants' meant for the claim limitation to recite "... the populated metadata

scheme" or "... the populated metadata schema." For Examination purposes and for consistency

the Examiner assumes the Applicants' meant "... the populated metadata schema." Appropriate

correction is required.

Claim 92, page 2, line 7, recites "... the client computers;". The claim limitation should

appropriately recite " ... the client computers." Appropriate correction is required.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
>
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
>
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
>
> manner in which the invention was made.

8.   Claims 88-90, 105-107, and 121-123 are rejected under 35 U.S.C. 103(a) as being

unpatentable over (US 5,675,785) Hall et al, hereafter Hall.

With respect to claim 88, accessing at least one description wherein the description

describes a database system (col. 3, lines 52-56), populating a metadata schema with the

description (col. 6, lines 13-26), automatically generating the database system according to the

populated metadata schema (col. 3, lines 57-67 and col. 4, lines 1-2), and using the database

system according to the populated metadata schema (col. 4, lines 3-15). Hall did not explicitly

teach populating a metadata schema with the description but it would have been obvious to one

having ordinary skill in the art at the time the invention was made to populate the metadata

schema with a description and to incorporate in Hall because such a modification would enhance

Hall's fact and reference tables which contain the attributes of the entries in the fact table which

are typically linked to the reference tables through one or more keyed columns containing code.

With respect to claim 89, automatically generating an actual table schema for the database

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system according to the populated metadata schema (col. 4, lines 37-46 and fig. 2 (11-15)

and automatically populating the actual table schema with the data (col. 5, lines 66-67 and col. 6,

lines 1-8).

With respect to claim 90, automatically generating one or more aggregates according to

the populated metadata scheme (col. 6, lines 12-18 and lines 62-67 and col. 7, line 1) and

automatically generating one or more query mechanisms according to the populated metadata

scheme (col. 7, lines 1-4 and lines 10-67 and col. 8, lines 1-9).

With respect to claim 105, this independent claim is rejected for the similar rationale given

for claim 88.

With respect to claim 106, this independent claim is rejected for the similar rationale given

for claim 89.

With respect to claim 107, this independent claim is rejected for the similar rationale given

for claim 90.

With respect to claim 121, this independent claim is rejected for the similar rationale given

for claim 105.

With respect to claim 122, this independent claim is rejected for the similar rationale given

for claim 106.

With respect to claim 123, this independent claim is rejected for the similar rationale given

for claim 107.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
>
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
>
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
>
> manner in which the invention was made.

10.   Claims 91-104, 108-120, and 124-132 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hall in view of (US 5,721,903) Anand et al, hereafter Anand.

With respect to claim 91, Hall did not teach, querying the database system and generating

one or more reports with the database system. Anand teaches, querying the database system (col.

1, lines 38-46) and generating one or more reports with the database system (col. 1, lines 48-63

and col. 2, lines 1-9). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to query a database system and to generate one or more reports with

the database system and to incorporate Hall's accessing a description with Anand's querying a

database system to generate one or more reports because such a modification would allow a more

efficient means of data retrieval and analyzation of data without requiring the user to have an

knowledge of underlying data structures.

With respect to claim 92, Hall did not teach, querying the database system in response to a

query request received from one or more client computers over a computer network, sending the

results of the querying to one or more of the client computers, generating the reports in response

to a report request received from one or more of the client computers over a computer network,

and sending the results of the report generating to one or more of the client computers. Anand

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teaches, querying the database system in response to a query request received from one or more

client computers over a computer network (col. 5, lines 50-67 and col. 6, lines 1-12), sending the

results of the querying to one or more of the client computers (col. 11, lines 33-36), generating

the reports in response to a report request received from one or more of the client computers over

a computer network (col. 11, lines 35-41), and sending the results of the report generating to one

or more of the client computers (col. 11, lines 42-52). It would have been obvious to one having

ordinary skill in the art at the time the invention was made to query the database system in

response to a query request received from one or more client computers over a computer

network, send the results of the query to one or more of the client computers, generate the

reports in response to a report request received from one or more of the client computers over a

computer network, and send the results of the report generation to one or more of the client

computers and to incorporate Hall's metadata schema with Anand's querying the database

system, sending the results of the query to one or more client computers, generating the reports in

response to a report request, and sending the results of the report generation because such a

modification would enhance the ability of a user to more efficiently retrieve data and to analyze

the data prior to sending it to the client computers (computers that access shared network

resources provided by another computer called a server).

With respect to claim 93, Hall did not teach, automatically extracting data from one or

more source databases according to the populated metadata schema, and automatically populating

the database system with the data according to the populated metadata schema. Anand teaches,

automatically extracting data from one or more source databases according to the populated

metadata schema (col. 3, lines 59-62 and col. 4, lines 24-29), and automatically populating the

database system with the data according to the populated metadata schema (col. 4, lines 38-45

and col. 10, lines 30-37). It would have been obvious to one having ordinary skill in the art at

the time the invention was made to automatically extract data from one or more source databases

according to the populated metadata schema and automatically populate the database system with

the data according to the populated metadata schema and to incorporate Hall's metadata schema

with Anand's automatically extracted data from one or more source databases according to the

populated metadata schema and to automatically populate the database system with the data

according to the populated metadata schema because such a modification would give the ability to

of the system to execute the request of events that involve a warehouse request in which the data

from a source database is extracted, transferred, transformed, and loaded into a target database.

The source database represents all of the data sources from which data will be extracted to

populate the metadata schema and the data warehouse or data mart.

With respect to claim 94, Hall did not teach, automatically populating the database system

includes automatically converting the data into one or more data formats according to the

populated metadata schema. Anand teaches, automatically populating the database system

including automatically converting the data into one or more data formats according to the

populated metadata schema (col. 1, lines 28-47). It would have been obvious to one having

ordinary skill in the art at the time the invention was made to automatically populate the database

system including automatically converting the data into one or more data formats according to the

populated metadata schema and to incorporate Hall's use of the database system to populate the

metadata schema with Anand's automatically populating the database system including

automatically converting the data into one or more data formats according to the populated

metadata schema because such a modification would allow Hall's system the ability to provide for

translating graphical user interface requests, manipulate data views, have rules for selecting

default parameters for converting the data, and choose layout and display formats for generating

the text data for the reports.

With respect to claim 95, Hall nor Anand did not teach, receiving the description from a

client computer over a network, but it would have been obvious to one having ordinary skill in the

art at the time the invention was made to receive the description from a client computer over a

network because the client computer has the ability to access shared network resources provided

by another computer called a server in a network or Internet environment.

With respect to claim 96, Hall did not teach, accessing a modified description wherein the

modified description includes the description and one or more modifications to the description,

re-populating the metadata schema with the modified description, automatically modifying the

database system according to the re-populated metadata schema, and using the database system

according to the re-populated metadata schema. Anand teaches, accessing a modified description

wherein the modified description includes the description and one or more modifications to the

description (col. 8, lines 14-23), re-populating the metadata schema with the modified description,

automatically modifying the database system according to the re-populated metadata schema (col.

8, lines 24-67), and using the database system according to the re-populated metadata schema

(col. 13, lines 21-34). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to access a modified description wherein the modified description

includes the description and one or more modifications to the description, re-populating the

metadata schema with the modified description, automatically modifying the database system

according to the re-populated metadata schema, and using the database system according to the

re-populated metadata schema and to incorporate Hall's accessing a description of a database

system with Anand's access a modified description wherein the modified description includes the

description and one or more modifications to the description, re-populating the metadata schema

with the modified description, automatically modifying the database system according to the re-

populated metadata schema, and using the database system according to the re-populated

metadata schema because such a modification would because such a modification would give the

ability to of the system to execute the request of events that involve a warehouse request in which

the data from a source database is extracted, transferred, transformed, and loaded into a target

database. The database system represents all of the data sources from which data will be

extracted to populate and to re-populate the metadata schema and to re-populate the meta schema

and the data warehouse or data mart.

With respect to claim 97, Hall nor Anand did not teach, the data in the database system is

not lost during the modification, but it would have been obvious to one having ordinary skill in the

art at the time the invention was made to have the data in the database system not lost during

modification because the client system is capable of handling several kinds of user modifications

and updates and the user has the ability to save the data before and after modification by the use

of a storage medium.

With respect to claim 98, Hall did not teach, automatically extracting data from one or more source databases according to the re-populated metadata schema, automatically converting data into one or more source modified data formats according to the re-populated metadata schema, and automatically populating the database system with the data according to the populated metadata schema. Anand teaches, automatically extracting data from one or more source databases according to the re-populated metadata schema (col. 2, lines 30-32), automatically converting data into one or more source modified data formats according to the re-populated metadata schema (col. 14, lines 35-40), and automatically populating the database system with the data according to the populated metadata schema (col. 4, lines 38-45 and col. 10, 30-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically extract data from one or more source databases according to the re-populated metadata schema, automatically convert the data to one or more modified data formats according to the re-populated metadata schema and automatically populate the database system with the data according to the populated metadata schema and to incorporate Hall's metadata schema with Anand's automatically extracted data from one or more source databases according to the re-populated metadata schema, automatically convert the data to one or more modified data formats according to the re-populated metadata schema, and to automatically populate the database system with the data according to the populated metadata schema because such a modification would give the system the ability to execute the request of events that involve a warehouse request in which the data from a source database is extracted, transferred, transformed, and loaded into a target database. The source database represents all of the data

sources from which data will be extracted to populate the metadata schema and the data

warehouse or data mart.

With respect to claim 99, Hall nor Anand did not teach, automatically modifying the

actual table schema for the database system according to the re-populated metadata schema, and

automatically populating the modified actual table schema with the data, but it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify the

actual table schema for the database system according to the re-populated metadata schema and

to populate the modified actual table schema with the data because such a modification would.

give the system the ability to execute the request of events that involve a warehouse request in

which the data from a source database is extracted, transferred, transformed, and loaded into a

target database.

With respect to claim 100, Hall did not teach, automatically modifying one or more

aggregates according to the re-populated metadata schema and automatically modifying one or

more query mechanisms according to the re-populated metadata schema.

Anand teaches, automatically modifying one or more aggregates according to the re-populated

metadata schema (col. 15, lines 15-31) and automatically modifying one or more query

mechanisms according to the re-populated metadata schema (col. 15, lines 1-14). It would have

been obvious to one having ordinary skill in the art at the time the invention was made to

automatically modifying one or more aggregates according to the re-populated metadata schema

and automatically modify one or more query mechanisms according to the re-populated metadata

schema and Hall's generation of one or more aggregates with Anand's modification of one or

more aggregates according to the re-populated meta schema and modifying one or more query mechanisms according to the re-populated metadata schema because such a modification would enhance Anand's system's ability to include structured query language aggregates and functions to provide various statistics and to execute the request of events that involve querying a database to extract and to re-populate the data in a data warehouse or data mart.

With respect to claim 101, Hall did not teach, automatically modifying the actual table schema includes modifying one or more tables in the actual table schema. Anand teaches, automatically modifying the actual table schema includes modifying one or more tables in the actual table schema (col. 2, col. 36-38 and col. 4, lines 30-33 and lines 42-45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically modify the actual table schema including modifying one or more tables in the actual table schema and to incorporate Hall's automatically extracting data with Anand's automatically modifying the actual table schema including modifying one or more tables because such a modification would further expand the usage of Anand's system and make the schema more efficient.

With respect to claim 102, Hall nor Anand did not teach, adding one or more of the tables, deleting one or more of the tables, adding one or more of the columns to the tables, and deleting one or more of the columns from the tables, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to add one or more tables, delete one or more tables, add one or more column to the tables, and delete one or more of the columns from the tables because this is well known in the art of relational databases with tables.

A relational database stores information in tables, rows and columns of data and conducts

searches by using data in specified columns of one table to find additional data in another table.

The rows of data and the columns represent fields and these match the data from one field in one

table with the data in a corresponding field of another table to produce a third table that combines

requested data from both tables.

With respect to claim 103, Hall nor Anand explicitly teaches, the tables include any of the

following: one or more fact tables, one or more dimension tables, or one or more aggregate

tables. It would have been obvious to one having ordinary skill in the art at the time the invention

was made to have the tables include fact tables, dimension tables, and aggregate tables in view of

Hall's teachings of summarized fact tables and aggregates in col. 1, lines 47-50 and col. 2, lines

12-15 and Anand teaches, dimensions in col. 15, lines 1-45 because together Hall and Anand

teach, one or more fact tables, dimensions, and aggregates and these tables meet several needs

such as the need for higher performance on many queries since the tables are structured closer to

the end users needs.

With respect to claim 104, Hall nor Anand explicitly teaches, wherein automatically

modifying the database system further includes modifying one or more indices in the database

system, but it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the database system to include modifying one or more indices in

the database system because an index is simply a listing of keywords and associated data that

point to the location of more comprehensive information, such as files and records on a disk or

record keys in a database and requires modifying occasionally.

With respect to claim 108, this independent claim is rejected for the similar rationale given for claim 91.

With respect to claim 109, this independent claim is rejected for the similar rationale given for claim 92.

With respect to claim 110, this independent claim is rejected for the similar rationale given for claim 93.

With respect to claim 111, this independent claim is rejected for the similar rationale given for claim 94.

With respect to claim 112, this independent claim is rejected for the similar rationale given for claim 95.

With respect to claim 113, this independent claim is rejected for the similar rationale given for claim 96.

With respect to claim 114, this independent claim is rejected for the similar rationale given for claim 98.

With respect to claim 115, this independent claim is rejected for the similar rationale given for claim 99.

With respect to claim 116, this independent claim is rejected for the similar rationale given for claim 100.

With respect to claim 117, this independent claim is rejected for the similar rationale given for claim 101.

With respect to claim 118, this independent claim is rejected for the similar rationale given

for claim 102.

With respect to claim 119, this independent claim is rejected for the similar rationale given for claim 103.

With respect to claim 120, this independent claim is rejected for the similar rationale given for claim 104.

With respect to claim 124, this independent claim is rejected for the similar rationale given for claim 108.

With respect to claim 125, this independent claim is rejected for the similar rationale given for claim 113.

With respect to claim 126, this independent claim is rejected for the similar rationale given for claim 97.

With respect to claim 127, this independent claim is rejected for the similar rationale given for claim 114.

With respect to claim 128, this independent claim is rejected for the similar rationale given for claim 115.

With respect to claim 129, this independent claim is rejected for the similar rationale given for claim 116.

With respect to claim 130, this independent claim is rejected for the similar rationale given for claim 117.

With respect to claim 131, this independent claim is rejected for the similar rationale given for claim 118.

With respect to claim 132, this independent claim is rejected for the similar rationale given

for claim 120.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Rosensteel, Jr. et al (US 6, 167,405) taught automatically populating a data warehouse.

Knutson et al (US 5,870,746) taught a data warehouse and metadata.

Anand et al (US 5,832,496) taught data warehousing and the retrieval of data.

INQUIRIES

12.   Any inquiry concerning this communication or earlier communications from the Examiner

should be directed to Ms. Ella Colbert whose telephone number is (703) 308-7064. The

Examiner can normally be reached Monday through Thursday from 6:30 a.m. to 3:00 p.m. EST.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kim

Vu, can be reached on (703)305-4393.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703)308-9051, (for formal communications intended for entry).

Or:

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(703)308-5403 (for informal or draft communications, please label

"PROPOSED" or **"DRAFT")**.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, Virginia., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Group Receptionist whose telephone number is (703)308-9600.

E. Colbert

E. Colbert

July 28, 2001

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SUPERVISORY PATENT EXAMINER
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